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REMARKS

The Office Action objected to informalities in claims 3, 4 and 9 that are corrected by the present amendment.

The Office Action rejected claim 1-3, 5-14, and 16-22 under 35 U.S.C. 102(b) as anticipated by Grimes (US 6359,444), herein after '444.

Claim 4 and 15 were rejected under 35 U.S.C. 103(a) as unpatentable over the '444 patent and an article by Thaysen.

As now amended the frequency response of the antenna has been added to all claims 1-22. This response is from about 860 MHz to 920 MHz (at -3db not in claim) and is discussed in the original application at the top of page 5 and shown in FIG. 3..

There is no frequency range for the antenna response suggested in the '444 patent that covers the frequency response in the claims as now amended. The Thaysen article does not discuss the narrow frequency range in the present claims.

With respect to the Examiners discussion of claims 3, 5 and 8 on page 3 of the office Action, the Examiner found that FIG.s 5, 6D and the discussion at Col. 21, lines 15-50 in the '444 patent disclose a two arm spiral structure where the arms grow as they radiate, and that the widths equal the spaces. This is just not so, the arms of FIG. 6D in the '444 patent grow part way and then diminish, and the spaces and widths of the antenna arms and the spaces are not equal in FIG. 6D or in any other '444 drawing.

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The Examiner has combined the '44 patent and the article by Thaysen to suggest claims 4 and 15. The Thaysen article discloses a spiral antenna structure and discusses the general characteristics of such an antenna. The '444 patent measures pH in an analyte. There is no suggestion that the Thaysen antenna could be of use in the '444 applications. Moreover, the general frequency ranges discussed in the two references are quite different from each other. The Thaysen article antenna is a broad band antenna with a frequency range of about 400 MHz to 3.8 GHz, while the '444 patent is a "resonant" (see abstract) circuit that is by definition narrow band, the graphs suggest 50MHz or so. The '444 patent generally describes operation under 700MHz, although there is one mention of 1023 MHz. But, there is no suggestion that the low end of the Thaysen broad range antenna would be suitable for the pH applications of the '444 patent. The '444 patent (again, see abstract) relies on a resonant frequency that partially depends on the analyte, and there is no suggestion that Thaysen's antenna would, much less should, perform this way.

Another inconsistency is that, to our best understanding, Thaysen's antenna is large, see page 36, left column, about ten lines down, where an arm length is described as "0.52 m" of about one and one half feet. Compare to the '444 patent where a dimension of a spiral antenna is given as a 5 cm (or about 2 inches) radius, in col. 21, line 20.

The '44 patent and the Thaysen article are antithetical with each other and cannot be combined to suggest the present invention. Moreover, any such combination can only come from "looking" at the present invention, and such "looking" is impermissible.

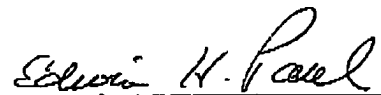
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The other referenced U.S. patent:: 6,281,794, 5,621,422 and 5,313,216 do not
help.

The claims now distinguish all the cited references and a notice of allowance is
requested.

Please charge any additional fee occasioned by this paper to our Deposit Account
No. 03-1237.

Respectfully submitted,



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